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(TEMPORARY FORM)

CONTROL NO: 10903

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FROM: Wisconsin Public Service Corp. GreenBay, Wis.	DATE OF DOC 10-17-74	DATE REC'D 10-22-74	LTR xxxx	TWX	RPT	OTHER
TO: Mr. Edson Case	ORIG 1-signed	CC	OTHER	SENT AEC PDR xxxxxxxx SENT LOCAL PDR xxxxxxx		
CLASS	UNCLASS xxxxxxx	PROP INFO	INPUT	NO CYS REC'D 1	DOCKET NO: 50-305	

DESCRIPTION:

Ltr Reporting Abnormal Occurrence in which valve RC 101A (RC 3-13) developed a packing leak.... after being repacked the flow to Loop A hot leg bypass loop was not re-established .....

ENCLOSURES:

ACKNOWLEDGED

DO NOT REMOVE

PLANT NAME: Kewaunee Nuclear Power Plant

FOR ACTION/INFORMATION 11-2-74 JGB

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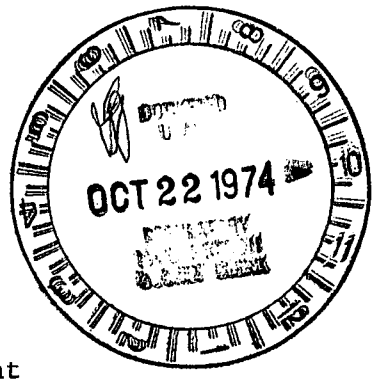
SENT to Lic Asst. Sheppard

WISCONSIN PUBLIC SERVICE CORPORATION

P.O. Box 1200, Green Bay, Wisconsin 54305

Regulatory File Cy.

October 17, 1974



Mr. Edson Case, Acting Director
Directorate of Licensing
Office of Regulation
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Case:

Subject: Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Unusual Event - RTD Bypass Loop

In accordance with the requirements of Technical Specifications, Paragraph 6.6.2.b.3, we submit the following:

Introduction

The Kewaunee Nuclear Power Plant employs Resistance Temperature Detectors (RTD's) in a bypass loop to measure hot leg and cold leg temperatures for use in the reactor protection circuit. The bypass loops, one from upstream of the steam generator to the suction of the reactor coolant pump is used for measuring the hot leg temperatures; the other from the discharge of the reactor coolant pump to the suction of the pump is used for cold leg temperatures. Both bypass loops join together through a flow measuring orifice to the suction of the reactor coolant pump. The RTD's are located in manifolds and the bypass loop is provided with isolation valves to allow replacement of RTD's without draining the reactor coolant system. These bypass loops are clearly depicted on Figure 4.2-1, Section 4 of the FSAR.

Problem

The plant had been in a hot shutdown condition following the in-service inspection of the steam generator tubes. The coolant pressure was 2335 psig and surveillance test (SP 807), Reactor Coolant System Integrity, was in progress.

During the test, valve RC 101A (RC 3-13) developed a packing leak. The valve was isolated by closing RC 100A (RC 3-12) and RC 102A (RC 3-14). Valve RC 101A was repacked, RC 100A and RC 102A re-opened, but flow to the Loop A hot leg bypass loop was not re-established. Several procedural checks were made to determine which of the valves was not opening, including radiographing of the valves. From these checks, it was determined that Valve RC 102A stem was separated from the disc thereby preventing the valve from being opened.

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The valve is a Rockwell Edwards F stainless steel univalve, general assembly figure number 3624-F-316J. The valve stem has a raised lip portion about 1/2 inch long on the end of the stem which is a machined and integral part of the stem, and provides support for the valve disc. These valves are installed in such a manner as to allow isolation of the manifold and not have pressure on the packing when the valve is closed. The valve is provided with an impactor handle, which was used to open the valve. Once the disc backseats, any additional force applied to the handle may cause the disc to break loose from the stem.

The bypass loops are provided with flow indication and alarms. In the event of the valve being closed or the disc breaking loose and cutting off the flow, an alarm would indicate to the operator that bypass loop flow has been reduced or stopped. In addition, that loop T_{ave} signal along with the ΔT protection signals would further indicate that the RTD temperatures have changed.

Corrective Action

Valve RC 102A was replaced with an identical valve from stock having proper QA Certification. The valves in the other bypass loop were radiographed and verified to be acceptable. In addition, a safety analysis was made to determine the number of Rockwell Edwards 3624-F-316J valves that are installed in the plant and their significance to the safe operation of the plant. The majority of the valves are drain, vent and instrument isolation valves. There are four (4) valves in the Safety Injection System. All four are permanently locked open with their handles removed. These valves were checked to verify that they were properly installed and these valves will not prevent flow if the disc is separated from the stem. The Operations Supervisor has issued a directive to all operators relative to the number of turns required to open and close the valve and that the impactor handle is not to be used to force the disc against the backseat. A copy of the vendor's valve drawing was attached to the directive.

Very truly yours,

Paul W. Fiedler for

E. W. James
Senior Vice President
Power Generation & Engineering

EWJ:sna

cc - Mr. J. G. Keppler, US AEC - Region III
Mr. Dwane Boyd, US AEC - Resident Inspector